

FLUID BED DRYER

General Information

The Fluid Bed Dryer FBD 2000 is a compact, portable dryer. Its powerful air delivery system makes drying a very fast operation.

The fluidisation mixes and separates the particles, minimising the risk of abrasion and the creation of lumps and resulting in a truly representative sample. The comprehensive set of controls makes it ideal for use in the laboratory on a wide selection of materials.

High airflow rates of the fluid bed dryer provide an excellent transfer of heat and ensure much faster and more homogeneous drying than other methods such as ovens, microwaves or vacuum drying.

The drying times range from a few seconds to several minutes. Complete drying is usually achieved in under 15 minutes.



Advantages

- Fast - Drying times range from a few seconds to minutes
- Efficient - High rates of heat transfer ensure faster and more homogeneous drying than oven, microwave or vacuum drying.
- Versatile - Suitable for most granular and powder materials
- Reproducible results - Precise controls ensure uniform and reproducible results
- Easy to use - Manageable controls with straightforward settings gases to escape

Specifications

Application	drying, homogenisation
Time setting	digital
Temperature control	0 - 200
Drying time*	15 min
Container volume	20 + 51
Accessories	single tubes in 2 and 5 litre sizes (stainless steel or glass) multi-tub Filter bags
Electrical supply data	115 V or 230 V, 50/60 Hz
Power connection	1-phase
W x H x D	260 x 340 x 495 mm
Net weight	~ 19 kg
Documentation	operation manual (CE certification and IQ/OQ on request)
Standards	CE

Function



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The fluid bed dryer FBD 2000 delivers the high volume air flow with a powerful fan from the base unit into a special tub assembly which holds the sample material.

The flow of heated air passes through a diffuser gauze which supports the bed and evenly distributes the air as it passes into the tub. A filter bag at the top of the tub keeps the sample in while allowing the air, moisture and gases to escape.

Temperature Control - Air is heated by a 2kW electric heater and can be set to any temperature to to 200 °C.

Timed Cycle - A built in digital timer enables the drying time to be pre-set and the drying operation to be carried out unattended. At the end of the cycle time an alarm sounds and the unit switches off automatically.

Air Flow - The air flow rate and fluidisation velocity are infinitely variable from 0.4 to 2.4 m/min volume (0.9 to 5m/sec speed). Optimum levels can be set by observing the sample behaviour with the glass tubs.

Filter Bag Material - Filter bags are usually nylon or terylene with other materials available for more aggressive conditions such as sustained high temperature drying.

Accessories - FBD Access Single tubs come in 2 and 5 litre sizes in either stainless steel or glass. A multi-tub unit with 4 x 300 ml tubs is also available for drying four samples simultaneously. Glass tubs are particularly useful for observing the fluidisation process to establish optimum settings.